UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,179	11/07/2000	Satoshi Nakajima	41020.P003	1119

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EXAMINER
TRAN, PHILIP B

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/708,179	NAKAJIMA, SATOSHI
	Examiner	Art Unit	
	Philip B. Tran	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>09 May 2005</u>.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-4,6-8,10-16,18-21 and 23-26* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4,6-8,10-16,18-21 and 23-26* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/9/2005</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Response to Amendments

Notice to Applicant

1.   This communication is in response to the amendment filed 10 March 2005.

Claims 1, 8, 13, 21 and 23 have been amended. Claims 5, 9, 17 and 22 have been

canceled. Therefore, claims 1-4, 6-8, 10-16, 18-21 and 23-26 are pending for further

examination.

Claim Objections

2.   Claim 10 is objected to because of the following informalities: claim 10 cannot be

dependent on canceled claim 9. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claim 8 recites the limitation "the pre-determined manner" in line 6. There is

insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

6.   Claims 1-4, 6-8, 10-16, 18-21 and 23-26 are rejected under 35 U.S.C. 102(b) as

being anticipated by Murashita, EP 0896284 A1.

Regarding claim 1, Murashita teaches a method comprising:

receiving a plurality of constituting elements of a data structure (= receiving

SGML document with DTD), determining occurrence frequency of each unique

constituting element in said data structure (= calculating frequency of occurrence of

each tag in the document), assigning a cookie representation to each of said unique

constituting elements based at least in part on the occurrence frequencies of said

unique constituting elements (= assigning a code according to the counting to the tag to

create a dictionary of tags), transmitting a list of said unique constituting elements

(dictionary of tags) in the order of their occurrence frequencies to allow a receiver of

said list of said unique constituting elements to infer the corresponding cookie

representations of the unique constituting elements and transmitting said data structure

in a representative form encoded with said cookie representations (= outputting code

information in compressed form to the decoding side wherein the data structure is

decompressed based on the frequency of occurrence of tag) [see Abstract and Figs. 11-

13 and Page 2, Line-10-58 and Page 19, Line 42 to Page 20, Line 52].

Regarding claims 2-4, Murashita further teaches said determining and assigning

comprises assigning an initial cookie representation to each unique constituting element

as the constituting elements are received (= assigning a code according to the counting

to the tag to create a dictionary of tags), and tracking occurrence frequencies of the

unique constituting elements (= calculating frequency of occurrence of each tag in the

document), and upon receipt of all constituting elements of the data structure, re-

assigning a final cookie representation for each of the unique constituting elements

based on the occurrence frequencies of the unique constituting elements (= creating a

dictionary of tags having the same code contents as the coding side based on the

frequency of occurrence of each tag), ordering said unique constituting elements based

on their occurrence frequencies, storing said constituting elements of the data structure

as they are received, using said initial cookie representations, and subsequently

replacing the stored initial cookie representations with the final cookie representations

(= transmitting code information in compressed form to the decoding side wherein the

data structure is decompressed based on the frequency of occurrence of a tag) [see

Figs. 2-14 and Page 20, Line 1 to Page 21, Line 36].

Regarding claim 6, Murashita further teaches the cookie representations are

numeric in form, with the cookie representations of the 128 most frequently occurred

unique constituting elements having a size of one byte each, and the cookie

representations of the next 32,640 most frequently occurred unique constituting

elements having a size of two bytes each (= numeric form) [see Fig. 13].

Regarding claim 7, Murashita further teaches said data structure is an XML data

structure (= SGML data structure), and said constituting elements comprise tag names,

attribute names and attribute values (= tags, character strings and codes) [see Figs. 13

& 32-33].

Regarding claim 8, Murashita teaches a method comprising receiving a plurality

of unique constituting elements of a data structure transmitted in a pre-determined order

(= receiving SGML document with DTD), inferring a plurality of corresponding cookie

representations for the received unique constituting elements in accordance with their

manner of transmissions under the pre-determined manner of transmission, and

receiving the constituting elements of the data structure in a representative form encode

with cookie representations (= assigning a code according to the counting to the tag to

create a dictionary of tags and transmitting code information in compressed form to the

decoding side wherein the data structure is decompressed based on the frequency of

occurrence of a tag) [see Abstract and Page 19, Line 42 to Page 20, Line 52].

Regarding claim 10, Murashita further teaches said inferring comprises inferring

a unique one-byte numeric representation for each of the first 128 unique constituting

elements transmitted, and a unique two-bytes representation for each of the next

32,460 unique constituting elements transmitted (= numeric form) [see Fig. 13].

Regarding claim 11, Murashita further teaches reconstituting the constituting

elements of the data structure, received in said representative form, based on the

inferred cookie representations (= creating a dictionary of tags having the same code

contents as the coding side based on the frequency of occurrence of each tag and

transmitting code information in compressed form to the decoding side wherein the data

structure is decompressed based on the frequency of occurrence of a tag) [see Figs. 2-14 and Page 20, Line 1 to Page 21, Line 36].

Regarding claim 12, Murashita further teaches said data structure is an XML data structure (= SGML data structure), and said constituting elements comprise tag names, attribute names and attribute values (= tags, character strings and codes) [see Figs. 13 & 32-33].

Claim 13 is rejected under the same rationale set forth above to claim 1.

Claims 14-16 are rejected under the same rationale set forth above to claims 2-4.

Claims 18-19 are rejected under the same rationale set forth above to claims 6-7, respectively.

Regarding claim 20, Murashita further teaches said apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook sized computer, a desktop computer, a set top box and a server [see Fig. 1].

Claim 21 is rejected under the same rationale set forth above to claim 8.

Claims 23-25 are rejected under the same rationale set forth above to claims 10-12, respectively.

Regarding claim 26, Murashita further teaches said apparatus is a selected one

of a wireless mobile phone, a palm sized personal digital assistant, a notebook sized

computer, a desktop computer, a set top box and a server [see Fig. 1].

Response to Arguments

7.   Applicant's argument has been considered but are not persuasive because of the

following reasons:

(A).   Applicant argued that Marashita does not teach or suggest "transmitting a list of

said unique constituting elements in the order of their occurrence frequencies..." as

recited in independent claim 1.

In response to applicant's argument, Marashita clearly teaches the claimed

invention of compressing and decompressing tag document such as SGML document

with transmitting a list of said unique constituting elements (dictionary of tags) in the

order of their occurrence frequencies to allow a receiver of said list of said unique

constituting elements to infer the corresponding cookie representations of the unique

constituting elements and transmitting said data structure in a representative form

encoded with said cookie representations. That is, outputting code information in

compressed form to the decoding side wherein the data structure is decompressed

based on the frequency of occurrence of tag [see Abstract and Figs. 11-13 and Page 2,

Line-10-58 and Page 19, Line 42 to Page 20, Line 52]. Thus, Marashita does teach or

suggest "transmitting a list of said unique constituting elements in the order of their

occurrence frequencies..."

Claim 13 contains similar limitations as claim 1 and therefore claim 13 is rejected under the same rationale set forth above to claim 1. Claims 8 is not similar to claim 1 as argued by applicant and therefore claim 8 is rejected differently as indicated above. Claim 21 contains similar limitations as claim 8 and therefore claim 21 is rejected under the same rationale set forth above to claim 8.

(B).   Applicant argued that claim 7 requires the necessary operational limitation of "determining occurrence frequency of each unique constituting element ... including ... attribute values" (hereinafter "VALUE FREQ") and Marashita does not teach or suggest "determining the frequency" of those document instance data values.

In response to applicant's argument, claim 7 only requires data structure is an XML data structure and constituting elements comprise tag names, attribute names and attribute values. There is no such term as the so-called "VALUE FREQ". Marashita clearly teaches the claimed invention of compressing and decompressing data structure tag document such as SGML data structure document with constituting elements comprise tags, character strings and codes [see Figs. 13 & 32-33]. Thus, Marashita does teach or suggest data structure is an XML data structure and constituting elements comprise tag names, attribute names and attribute values.

Each of claims 12, 19 and 25 contains similar limitations as those described in claim 7 and therefore claims 12, 19 and 25 are rejected under the same rationale set forth above to claim 7.

Other dependent claims are rejected at least for the same reasons set forth

above to independent claims 1, 8, 13 and 21 or by other reasons set forth above in the

rejection section.

Other References Cited

8.   The following references cited by the examiner but not relied upon are

considered pertinent to applicant's disclosure.

A) Yoshida et al, U.S. Pat. No. 5,254,990 discloses compression and

decompression of data.

B) Whiting et al, U.S. Pat. No. 5,463,390 discloses data compression process.

C) Murashita et al, U.S. Pat. No. 5,907,637 discloses compressing and
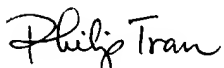
decompressing data process.

Conclusion

9.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CAR 1.136(a).

**A SHORTENED STATUTORY PERIOD FOR REPLY TO THIS FINAL ACTION
IS SET TO EXPIRE THREE MONTHS FROM THE MAILING DATE OF THIS ACTION.
IN THE EVENT A FIRST REPLY IS FILED WITHIN TWO MONTHS OF THE MAILING
DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED
UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY
PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE
DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE
PURSUANT TO 37 CAR 1.136(A) WILL BE CALCULATED FROM THE MAILING
DATE OF THE ADVISORY ACTION. IN NO EVENT, HOWEVER, WILL THE
STATUTORY PERIOD FOR REPLY EXPIRE LATER THAN SIX MONTHS FROM THE
MAILING DATE OF THIS FINAL ACTION.**

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Philip Tran whose telephone number is (571) 272-3991.

The Group fax phone number is (703) 872-9306. If attempts to reach the examiner by

telephone are unsuccessful, the examiner's supervisor, Saleh Najjar, can be reached on

(571) 272-4006.

11.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Philip Tran

Philip B. Tran
Art Unit 2155
June 15, 2005